		UTAH OIL AND	GAS CONSER	ATION COMMISSIO	ON		
REMARKS: WELL LOG	ELECTRIC LOGS	_FILE_XW/	ATER SANDS	LOCATION INSPECT	ED OIL	SUB. REPORT/a	bd.
11.5.83 Operato	4 well non	u change	Som	Kiko Bell	to AFE	Manage	ment
<b>/</b>							
			·				-
		,					
DATE FILED 12-2-82							
LAND: FEE & PATENTED	STATE LEASE NO.		PUBLIC	LEASE NO. <b>U-5097</b>	/2	INDIAN	1
DRILLING APPROVED: 12-6	5-82						
SPUDDED IN:							
COMPLETED:	PUT TO PRODU	CING:					
INITIAL PRODUCTION:							
GRAVITY A.P.I.							
GOR:							
PRODUCING ZONES:					1917		
TOTAL DEPTH:							
WELL ELEVATION: 589	0 'GR						
DATE ABANDONED: 2.11.8		on rescin	wood				
FIELD: WILDCAT	3/86 Unales	anated					
UNIT:		0					
COUNTY: DUCHESNE						· · · · · · · · · · · · · · · · · · ·	
WELL NO. HIKO BELL	# 44-6 AFE				API N	0. 43-013-	-30716
LOCATION 660	FT. FROM (X) (S) LINE,	660	FT. FR	OM (E) (WYLINE.	SF S		SEC.6
			-		<u></u>		
TWP. RGE.	SEC. OPERATOR		11	TWP. RGE.	SEC.	OPERATOR	
10S 17E	6 HIKO BELL	magemm	· me				. 1

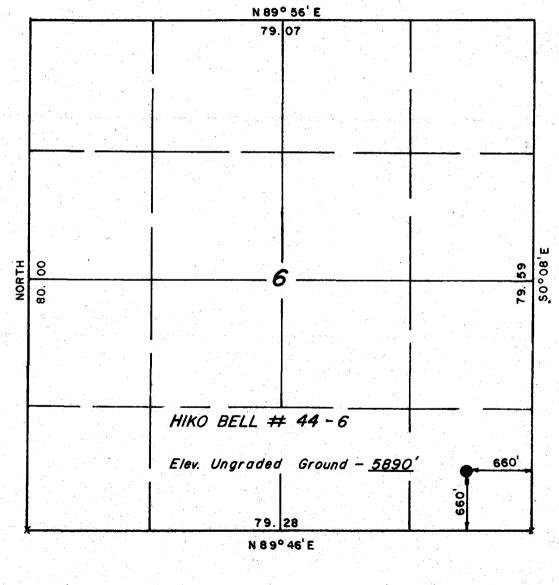
SUBMIT IN TRIPLIC

(Other instructions on reverse side)

Form approved. Budget Bureau No. 42-R1425. 16

		OGICAL SURV		ittort		5. LEASE DESIGNATION AND SERIAL NO.
A DDL IC A TIO						U-50972
1a. TYPE OF WORK	N FOR PERMIT	TO DRILL,	DEE	EN, OR PLUG	BACK	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
b. TYPE OF WELL	RILL 🖾	DEEPEN	_	PLUG BA		7. UNIT AGREEMENT NAME
2. NAME OF OPERATOR	WELL OTHER			ZONE ZONE	TIPLE []	8. FARM OR LEASE NAME
	ining & Oil Com	nanz				White Mule Springs
3. ADDRESS OF OPERATOR	citing a out con	party				9. WELL NO.
P.O. Drawer	AB, Vernal, Uta	ah 84078				Hiko Bell#44-6
4. LOCATION OF WELL (I	Report location clearly an	d in accordance wi	th any	State requirements.*)	<u> </u>	10. FIELD AND POOL, OR WILDCAT Wildcat
	660' FEL &	660' FSL		SESE		11. SEC., T., R., M., OR BLK.
At proposed prod. zo			SLM			AND SURVEY OR AREA
	Duchesne Co	unty, Utah		5890 GR.		Sec. 6, T10S, R17E, SL
	AND DIRECTION FROM NEA		T OFFI	E*		12. COUNTY OR PARISH   13. STATE
25 MILES SOL 15. DISTANCE FROM PROP	thwest of Mytor	n, Utah				Duchesne Co. Utah
LOCATION TO NEARES PROPERTY OR LEASE	T		1	O. OF ACRES IN LEASE	17. No.	OF ACRES ASSIGNED
(Also to nearest drl	g. unit line, if any)	2700 '	1	ي 46.1	10 1	HIS WELL 40
OR APPLIED FOR, ON TH	PRILLING, COMPLETED, US LEASE, FT.	1300'	19. p 570	ROPOSED DEPTH	20. кота	ROTARY
21. elevations (Show wh 5890 GR.	ether DF, RT, GR, etc.)				· · · · · · · · · · · · · · · · · · ·	22. APPROX. DATE WORK WILL START* March 28, 1983
	1	PROPOSED CASI	NG AN	D CEMENTING PROGR	.AM	
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FO		SETTING DEPTH		
12½"	9 5/8"	24# new		300	_	QUANTITY OF CEMENT
7 7/8!!	5½"	15.5# new		5700'	-	Circ. to surface 440 sx.
***************************************	se to drill a 5 ce used with ge g if commercial	t to ariti	a /	7/8" bole to 5	tary to 700 fee	ols. KCl water t and set 5½"
The sa	APPRO OF U OIL, O DATE: BY:	VED BY TI TAH DIVIS BAS, AND	HESSION MIN	STATE OF ING	ę	DEC 0 2 1982
s above space describe one. If proposal is to deventer program, if any is signed Robert (This space for Federal	5. Grenston		····	lug back, give data on p n subsurface locations an nager of Explo		ctive zone and include productive and true voltal Side of the blowout OIL. GAS & MINING  DATE NOV. 30, 1982
PERMIT NO.	,			APPROVAL DATE		
APPROVED BY CONDITIONS OF APPROVA	L. IF ANY:	TITL	E			DATE

### T 10 S , R 17 E , S.L.B. 8 M.



X = Section Corners Located

#### PROJECT

#### HIKO BELL MINING & OIL CO.

Well location, HIKO BELL # 44-6, located as shown in the SE I/4 SE I/4 Section 6, TIOS, RITE, S.L.B. & M. Duchesne County, Utah.

#### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY
SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELLEF

REGISTERED LAND SURVEYOR REGISTRATION Nº 2454 STATE OF UTAH

# UINTAH ENGINEERING & LAND SURVEYING POBOX Q - 85 SOUTH - 200 EAST VERNAL, UTAH - 84078

DATE
11 - 24 - 82
REFERENCES
GLO Plat
FILE
HIKO BELL

SIZE OF HOLE

121/4"

7 7/8"

SIZE OF CASING

9 5/8"

5½"

SUBMIT IN TRIPLICATION (Other instructions (reverse side)

Form approved
Budget Bureau No. 42-R1425

QUANTITY OF CEMENT

Circ. to surface

440 sx.

# UNITE STATES DEPARTMENT OF THE INTERIOR

5. LEASE DESIGNATION AND SERIAL NO. **GEOLOGICAL SURVEY** RESERVED U-50972 6. IF INDIAN, ALLOTTEE OR TRIBE NAME. APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK In. TYPE OF WORK DRILL 🖾 DEEPEN [ 7. UNIT AGREEMENT NAME PLUG BACK SALT LAKE CITY, UTAH b. TYPE OF WELL WELL X WELL MULTIPLE Zone 8. FARM OR LEASE NAME 2. NAME OF OPERATOR White Mule Springs Hiko Bell Mining & Oil Company 9. WELL NO. 3. ADDRESS OF OPERATOR Hiko Bell#44-6 P.O. Drawer AB, Vernal, Utah 84078 10. FIELD AND POOL, OR WILDCAT 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*) Wildcat 660' FEL & 660' FSL 11. SEC., T., B., M., OR BLK. AND SURVEY OR AREA Section 6, TlOS-R17E, SLM At proposed prod. zone Duchesne County, Utah 5890 GR. Sec. 6, TlOS, Rl7E, SLM 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 12. COUNTY OR PARISH | 13. STAIR 25 miles southwest of Myton, Utah Duchesne Co. Utah. DISTANCE FROM PROPOSED\* 16. NO. OF ACRES IN LEASE LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig, unit line, if any) 17. NO. OF ACRES ASSIGNED TO THIS WELL 1 2700 1746.1 1". DISTANCE FROM PROPOSED LOCATION" 19. PROPOSED DEPTH 20. ROTARY OR CABLE TOOLS TO SEAREST WELL, DRILLING, COMPLETED, 63 APPLIED FOR, ON THIS LEASE, FT. 1300' 5700 Rotary 21. ELEVATIONS (Show whether DF, RT, GR, etc.) 22. APPROX. DATE WORK WILL START\* 5890 GR. March 28, 1983 PROPOSED CASING AND CEMENTING PROGRAM

Propose to drill a 5700' Green River test with Rotary tools. KCl water will be used with gel to drill a 7 7/8" hole to 5700 feet and set  $5\frac{1}{2}$ " casing if commercial production is established.

WEIGHT PER FOOT

24# new

15.5# new

The sands in the lower Green River Formation will be tested for oil and gas.

300

5700'

SETTING DEPTH

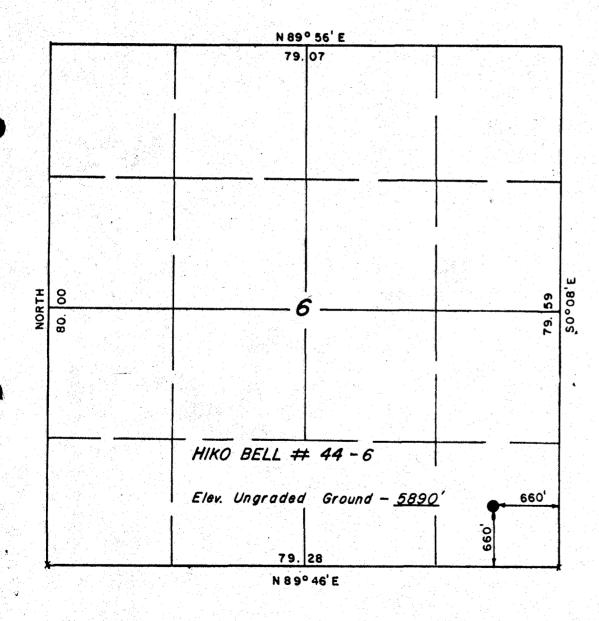
MOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED
TO OPERATOR'S COPY

\*See Instructions On Reverse Side

FLARING OR VENTING OF TAS IS SUBJECT TO NTL 4-4 DATED 1/1/80

## T 10 S, R 17 E, S.L.B. & M.



X = Section Corners Located

#### PROJECT

#### HIKO BELL MINING & OIL CO.

Well location, HIKO BELL # 44-6, located as shown in the SE 1/4 SE 1/4 Section 6, TIOS, RITE, S.L.B. & M. Duchesne County, Utah.

#### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR REGISTRATION Nº 2454

UINTAH ENGINEERING & LAND SURVEYING
PO. BOX Q - 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE  "= 1000"	DATE
1 = 1000	11 - 24 - 82
PARTY	REFERENCES
N.J.M. D.D.	GLO Plat
WEATHER	FILE
Cloudy & Cold	HIKO BELL

Hiko Bell Mining and Oil Company Well No. 44-6 Section 6-10S-17E Duchesne County, Utah Lease U-50972

#### Supplemental Stipulations:

- 1. Traveling off the right-of-way will not be allowed. Width of access roads, both existing and planned, will be 30 feet total disturbed area. Turn-outs will not be required.
- 2. Burn pits will not be constructed. There will be no burying of garbage or trash at the well site. Refuse will be contained in trash cages and hauled to the nearest sanitary landfill. No trash will be thrown in the reserve pit.
- 3. A wire mesh or net type of fence, topped with at least one strand of barbed wire, will be used around the reserve pit.
- 4. Water for this location will be hauled from Pariette Draw in T.8S. R.18E., Section 27.
- 5. The BLM will be contacted at least 24 hours prior to any rehabilitation activities. The operator may be informed of any additional needed seeding requirements.
- 6. The top 6--10 inches of topsoil will be stockpiled as addressed in the applicant's 13 point plan.
- 7. All permanent (onsite for six (6) months duration or longer) structures constructed or installed, including the pumpjack, shall be painted a flat, non-reflective, earth tone color to match Themec 23-08351 Mesa Brown Enduratone or an approved equal. All facilities shall be painted within 6 months of when the production facilities are put in place. Facilities that are required to comply with OSHA (Occupational Safety and Health Act) standards are excluded.
- 8. Adequate and sufficient electric/radioactive logs will be run to locate and identify the prime oil shale horizons in the Mahogany zone of the the Green River formation. Casing and cementing programs will be adjusted to eliminate any potential influence of the well bore or productive hydrocarbon zones on the oil shale resource. Surface casing program may require adjustment for protection of fresh water aquifers. (See attached tentative casing and cementing program for the Uinta Basin).

#### HIKO BELL MINING & OIL COMPANY

WHITE MULE SPRINGS OIL

AND GAS FIELD 44-6

SEC. 6, T10S-R17E, S.L.M DUCHESNE COUNTY, UTAH

#### DRILLING PLAN

- 1. The geologic name of the surface formation is the Tertiary Uinta Formation.
- 2. Estimated tops of important geologic markers are as follows:

Green River Formation	1064
Wasatch Tongue	4864
Green River Tongue (carbonate marker)	5271
Wasatch Formation	5464
Proposed T.D.	5700

3. Oil or gas may be encountered in the Green River and Wasatch Formations. No other formations are expected to produce oil, gas, water, or other minerals in measurable quantities.

4.	Size of Hole		Size of Casing & Wt./ft.	Setting Depth	Quantity of Cement
	$12^{1}z^{0}$		9 5/8", 24# new	300'	Circ to Surface
	7 7/8"	Take.	5岁, 15.5# new	5700'	440 sx.

- 5. Operator's minimum specifications for pressure control equipment is a 10", 3000 psi hydraulic blowout preventer. Blowout preventer will be tested daily. Refer to Diagram "C".
- 6. Fresh water base drilling mud will be used for the entire drilling operations, utilizing a dispersed mud system to total depth. Mud weight will be controlled by drilling solids. Barite will be used for weighing materials in the event of abnormal pressures being encountered.
- 7. Auxiliary equipment is as follows:
  - 1. Kelly Cocks
  - 2. Bit Floats
  - 3. A full opening-quick close drill pipe valve is to be located on the derrick floor at all times.

Drilling Plan, Intinued
Hiko Bell Mining & Oil Company
White Mule Springs-Hiko Bell Well #44-6
Duchesne County, Utah

Page Two

8. Commercial shows of oil and gas will be tested. We are anticipating drill stem tests in the Wasatch and Green River Formations. No coring is anticipated.

The logging program is as follows:

- 1. Mud logging unit, from 300' to T.D.
- 2. Dual Induction Laterlog-T.D. to base of surface casing.
- 3. BHC-Gamma Ray Sonic w/Caliper, Integrated T.D. to base of surface casing.
- 4. Formations Density/Compensated Neutron, Zones of interest.
- 9. No abnormal pressures or temperatures are anticipated. No potential hazards such as hydrogen sulfide are expected, based upon well experience in the area.
- 10. The anticipated starting date is, March 28, 1983

Robert E. Covington, Mngr. Explor. Hiko Bell Mining & Oil Company

Vernal, Utah

#### HIKO BELL MINING & OIL COMPANY

13 Point Surface Use Plan

For

Well Location
White Mule Spring
HIKO BELL = 44-6

Located in

Section 6, TlOS-R17E, S.L.M.

Duchesne County, Utah

Hiko Bell Mining & Oil Dompany White Mule Spring-Hiko Bell #44-6 Section 6,7105,F17E,SLM

#### 1. EXISTING ROADS

To reach the Hiko Bell Mining & Oil Company Well location White Mu-Springs-Hiko Bell #44-6, located in the SEASE4 of Section 6.TlOS-R17E, S.I.E.&M. Duchesne County, Utah; proceed Southwesterly out of Miton, I along U.S. Highway 40 - 1.5 miles to the junction of this Highway and U State Highway 53, to the south; proceed Southerly along this Highway 1. miles more or less, to the intersection of Utah State Highway 53 and Utah State Highway 216, thence proceed Southeasterly along Utah State Highway 216 - 17.8 miles to the junction of this road and an existing r to the west, proceed along this road 3 miles to the location. The location is on the north side of the road. The location is approximately 50 from the existing road.

The Highways mentioned in the foregoing paragraph are bituminous surfaced roads up to the intersection of Utah State Highway 53 and 216 and 216 point Utah State Highway is constructed out of existing rative materials that are prevalent to the existing area. It is located in the ranges from clay to sandy-clay shale materials, as are the aforemention cirt oil field service roads and other roads in the vicinity.

There is no anticipated construction on any portion of the above described roads. They will meet the necessary standards required to facilitate an orderly flow of traffic during the drilling phase, completely phase, and production shase, of the well. These roads will be maintain at the standards required by the B.L.M. or other controlling agencies.

#### 2. PLANNED ACCESS ROAD

See Topographic Map "B". There will be a limited amount of road will cind to the location off of the main road. The location is approved all feet off the main road.

#### 2. LOCATION OF EXISTING WELLS

See Topographic Map "B".

There are three existing wells in the vicinity, which were all plue and abandoned. They are as follows;

Phillips Petroleum Company Phillips-Ouray No. A-1 NW4SE4, Sec. 31, T9S-R17E, SLM Plugged and Abandoned

Mountain Fuel Supply
Wells Draw No. 1
NWASEL, Section 8, T10S-P17E, SIM
Plugged and Abandoned

Mountain Fuel Supply
Wells Draw No. 2
SEANWA, Section 8, TIOS-R17E, SIM
Plugged and Abandoned

POOR GOPY

#### 4. LOCATION OF EXISTING AND PROPOSED FACILITIES

There are no Hiko Bell Mining & Oil Company tank batteries, production facilities, oil gathering lines, gas gathering lines, injection lines, or disposal lines within a mile radius of this location. Mountain fuel has a gas line ½ mile to the west of this location.

In the event that production is established, plans for a flowline from this location to existing lines in the area will be submitted to the proper authorities and the existing area of the location will be utilized for the establishment of the necessary production facilities.

The total area that is needed for the production of this well will be fance and cattleguards which will be utilized for access to these facilities.

The area will be built if possible, with native materials and if these materials are not available, then the necessary arrangements will be made not got them from private sources.

These facilities will be constructed using bulldozers, graders, and the crews to construct and place the proposed facilities.

If there is any deviation from the above, all appropriate agencies will be notified.

Rehabilitation of distruced areas no longer needed for operations after construction is completed will meet the requirements of Item #10.

#### 5. LOCATION OF AND TYPE OF WATER SUPPLY

Water to be used for the drilling and production of this well will be hauled by truck from Pariette Draw, at a point northeast of the well approximately 20 miles. The BLM has set aside an area for drawing water from the stream that is used by most of the operators in the area.

In the event that the above source is not used, other arrangements will be made with the proper authorities for an alternate source.

All regualtions and guidelines will be followed and no deviations will be made unless all concerned agencies are notified.

There will be no water well drilled at this location site.

#### 6. SOURCE OF CONSTRUCTION MATERIALS

All construction materials for this location site and access road shall be borrow materials accumulated during the construction of the location site and access road. No additional road gravels or pit lining materials from other sources are anticipated at this time, but if they are required the appropriate actions will be taken to acquire them from private sources.

The native materials that will be used in the construction of this location site and access road will consist of a sandy-clay soil and sandstone and shale naterial gathered in actual construction of the road and location.

POOR GOPY

#### 7. METHODS FOR HANDLING WASTE DISPOSAL

A reserve pit shall be constructed, and at least half of the depth of the reserve pit shall be below the existing ground surface. Non-flammable materials such as cuttings, salts, chemicals, etc., will be buried in the reserve pit and covered with a minimum of four feet of earth materials. Prior to the onset of drilling, the reserve pit will be fenced on three sides. Upon completion of drilling, the fourth side of the reserve pit will be fenced and allowed to dry completely before backfilling and reclamation are attempted. A portable toilet will be supplied for human waste.

A trash basket will be provided for flammable materials. Waste will be hauled by truck to the nearest sanitary landfill.

#### ε. <u>PUCILLARY</u> FRCILITIES

There are no ancillary facilities planned for at the present time, and none foreseen in the near future.

#### 9. WELL SITE LAYOUT

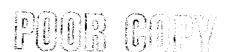
See attached Location Layout Sheet.

The B.L.M. District Manager shall be notified before any construction begins on the proposed location site and road.

As mentioned in Item #6, the pits will be unlined unless it is determined by the representatives of the agencies involved that the materials are too porous and would cause contamination to the surrounding area; then the pits will be lines with a gel or any other type of material necessary to make it safe and tight.

#### 10. PLANS FOR RESTORATION OF SURFACE

As there is some topsoil on the location site, all topsoil shall be stripped and stockpiled. (See Location Layout Sheet and Item #9). When all drilling and production activities have been completed, the location site and access road will be reshaped to the original contour and stockpiled topsoil spread over the disturbed area. Fences around pits are to be removed upon completion of drilling activities and all waste being contained in the trash baskets will be hauled to the nearest sanitary landfill. The reserve pit will be completely fenced and allowed to dry before covering. When restoration activities have been completed, the location site and access ramp shall be reseeded with a seed mixture recommended by the B.L.M. District Manager when the moisture content of the soil is adequate for germination. The Lessee further covenants and agrees that all of said cleanup and restoration activities shall be done and performed in a diligent and most workmanlike manner and in strict conformity with the above mentioned Items #7 and #10.



Hiko Bell Mining & O Company White Mule Spring-Hiko Bell #44-6 Section 6 , T103-F17F, SEM

#### 11. OTHER INFORMATION

The Topography of the General Area - (See Topographic Map "A").

The area is a basin that lies between the Book Cliff Mountains to the South and the Uinta Mountains to the North. The area is interlaced with numerous canyons and ridges which are extremely steep with numerous ledges formed in sandstone, conglomerates, and shale deposits.

The majority of the washes and streams in the area are non-perennial streams and flow to the east and are tributaries to the Green River.

The soils of the semi-arid area are of the Uinta Formation and Duchesne River Formation (the Fluvial, Sandstone, Mudstone) from the Eccene and Quaternary Epock (gravel surfaces) and the visible geologic structures consist of light broken clay (GD) to sandy soils (EG-LI) with poorly graded gravels and shales with outcrops of rock (snadstone, mudstone, conglomerates, and shales).

Due to the low precipitation average, climatic conditions and the marginal types of soils, the vegetation that is found in the area is common of the semi-arid region we are located in and in the lower elevations of the Uinta Basin. It consists of, as primary flora, areas of sagebrush, rabbitbrush, some grasses, cacti, and large areas of bare soils devoid of any growth. In the areas that are formed along the edges of perennial streams cottonwoods, willows, tamarack, sagebrush, rabbitbrush, grasses, and cacti can be found.

The fauna of the area is sparse and consists predominantly of mule deer, coyotes, pronghorn antelope, rabbits, and varieties of small ground squirrels and other types of redents and various reptiles comes to the area.

The birds of the area are raptors, finches, ground sparrow, magpies, crows, and jays.

The area is used by man for the primary purpose of grazing domestic livestock.

The Topography of the Immediate Area (See Topographic Map "E").

White Mule Spring-Hiko Bell # 44-6 location site sits on a sloping hillside southof a non-perennial drainage which drains into the Sheep Wash and Big Wash. Sheep Wash is located 3.5 miles east of the location, and Big Wash is located .5 miles north of the location. Eig Wash drains into Sheep Wash and Sheep Wash drains into the Green River to the East.

The geologic formation on the location is the Uinta Formation and consists of light brownish-gray clay (SP-CL) with some sandstone outcrops.



Hiko Bell Mining & Oi Company Write Mule Spring-Hiko Bell #44-6 Lotte: 6, 1105-R171, SIM

#### 11. OTHER INFORMATION -cont...

The location is covered with some sagebrush and grasses.

There are no occupied duellings or other facilities of this nature in the general area.

There are no visible archaeological, historical, or cultural sites within any reasonable proximity of the proposed location site. (see Topographic Map B).

#### 12. LESSEE'S OR OPERATOR'S RURESENTATIVE

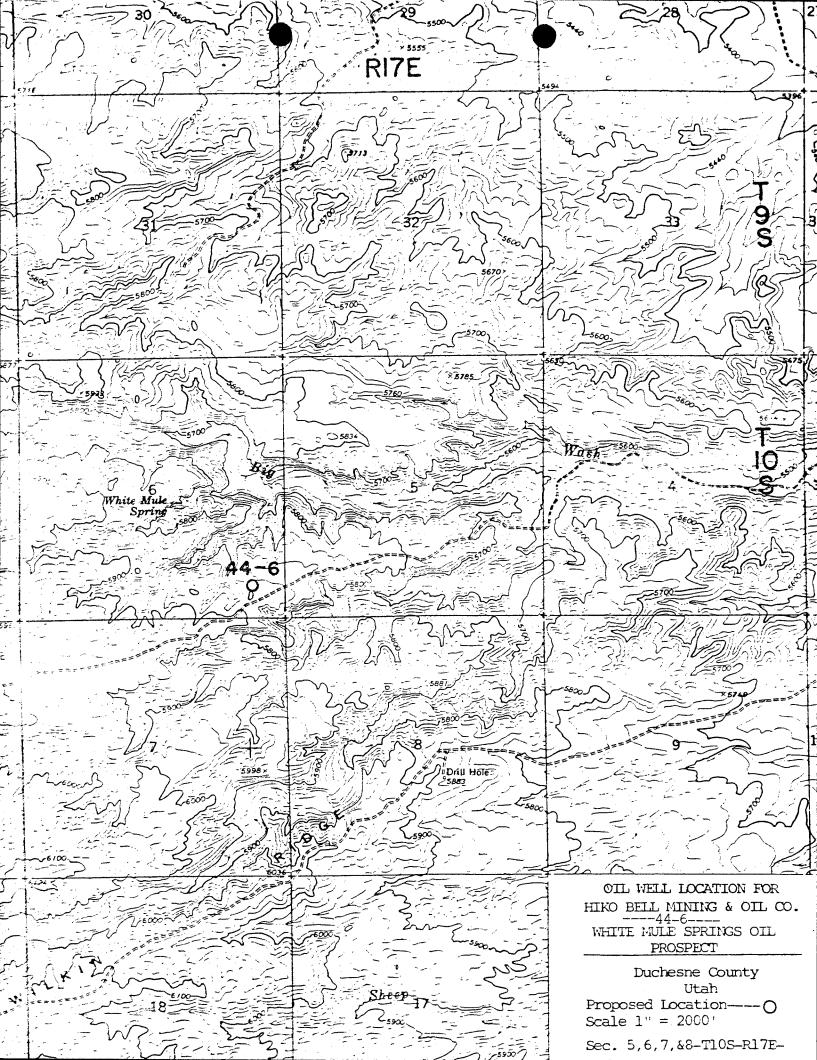
Robert E. Covington
Manager of Exploration
Himo Hill Lining & Oil Company
P.O. Drawer AB
Vernal, Utah 84078

801-789-3233

#### 13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access road route: that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that work associated with the operation proposed herein will be performed by HIKO BELL MINING & CIL COMPANY and its contractors and subcontractors in conformity with this plan and terms and conditions under which it is approved.

	DATE		Dahart D	Covington,	N	





# United States Department of the Interior

Conselvation Division
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

February 2, 1981

General Outline for the Protection and Isolation of Ground Water and Oil Shale in the Uinta Basin.

The oil shale occurs with varying thicknesses in most parts of the Uinta Basin and at varying depths. Ground water also occurs at varied depths above and below the Oil Shale. These ground waters have varying degrees of salinity. Nonetheless, drilling for hydrocarbon in the Uinta Basin should provide for the protection of the oil shale and the ground water if either is present.

The protection of the oil shale and the ground water can effectively be carried on through the design of an adequate casing and cementing program for each well drilled in the area.

In the Uinta Basin, water occurs mainly in the Uinta and the Green River formations. As drilling for hydrocarbon gets deeper into the crust of the earth, more ground water might be encountered and will be protected as it is encountered.

This notice's purpose is to attempt to lay the groundwork for a casing program and cementing program that will protect the oil shale and the ground water if present.

These programs are to be considered as guidelines. The specificity of casing depth, amount of cement and the depth of staging collars will be considered on an individual basis after a careful study of the logs of each individual well. Cementing from the bottom up is an economical solution if carefully conducted.

The casing and cementing program presented here as an example, will assume that fresh water was encountered in the upper parts of the Green River, that the oil shale occurs in the middle of the Green River (1000 foot section) and that some ground water is encountered in the lower parts of the Green River.

In this case, three areas will have to be cemented to assure the integrity of the ground water and oil shale. These areas are above the upper fresh water, across the oil shale and below the lower water aquifer. Deep aquifers that do not contain useful water are cemented to prevent water zone influence on production.

The following casing and cementing program will be appropriate for this example:

A. Surface casing is set at approximately 300 feet and cemented to the surface.

- B. The next casing string will be set at approximately 300 feet below the lowest aquifer. Cementing will be done in three stages, using two stage collars and cement baskets or equivalent as described below and on attached sketches:
  - 1. Cement first stage through the casing shoe to fill annulus back to base of lower aquifer.
  - 2. Place 1st stage collar (with cement basket immediately below) at a selected point at the base of the oil shale. Cement will have to reach top of oil shale.
  - 3. Place 2nd stage collar (with cement basket immediately below) 50 feet above the top of the Bird's Nest aquifer and cement to at least 300 feet above the stage collar.
- C. The above is an example. Reasonable equivalents that accomplish these same protective measures, (such as cementing the water zones instead of isolating them), depending on the individual cases will be considered for approval.
- D. When the above mentioned well is to be abandoned, inner-casing plugs will have to be placed at the same depth as the above mentioned annulus cement jobs.

The use of cement bond logs will verify the authenticity of the cement job performed.

E. The Operator of such well should notify U.S.G.S. 48 hours prior to commencement of casing and cementing activity, so a technician could be dispatched to witness the operations to verify compliance with casing and cementing program.

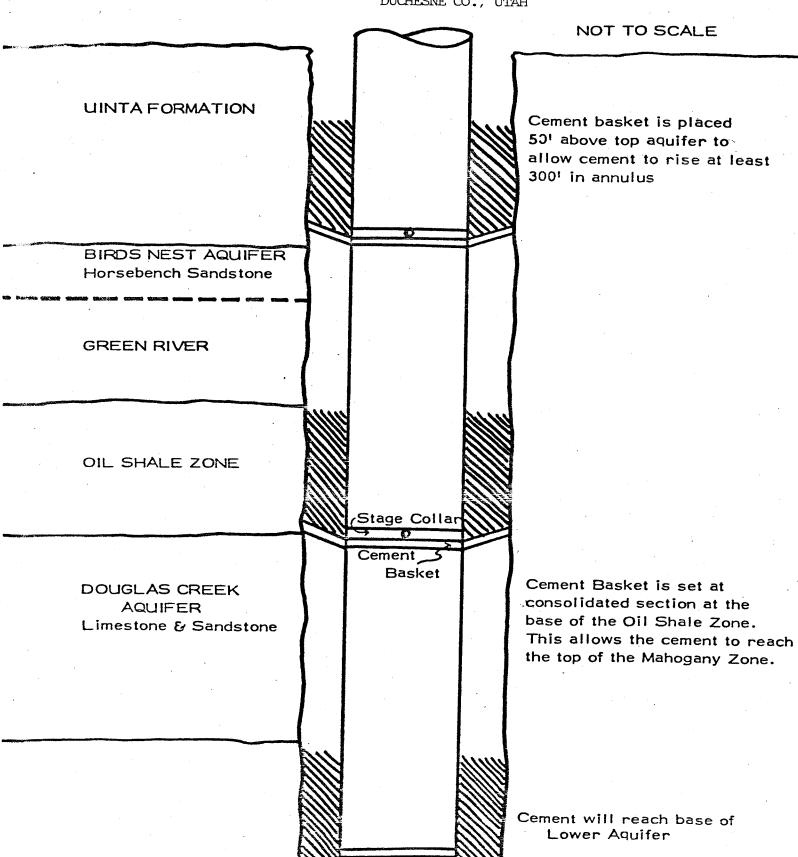
#### Attached Sketches:

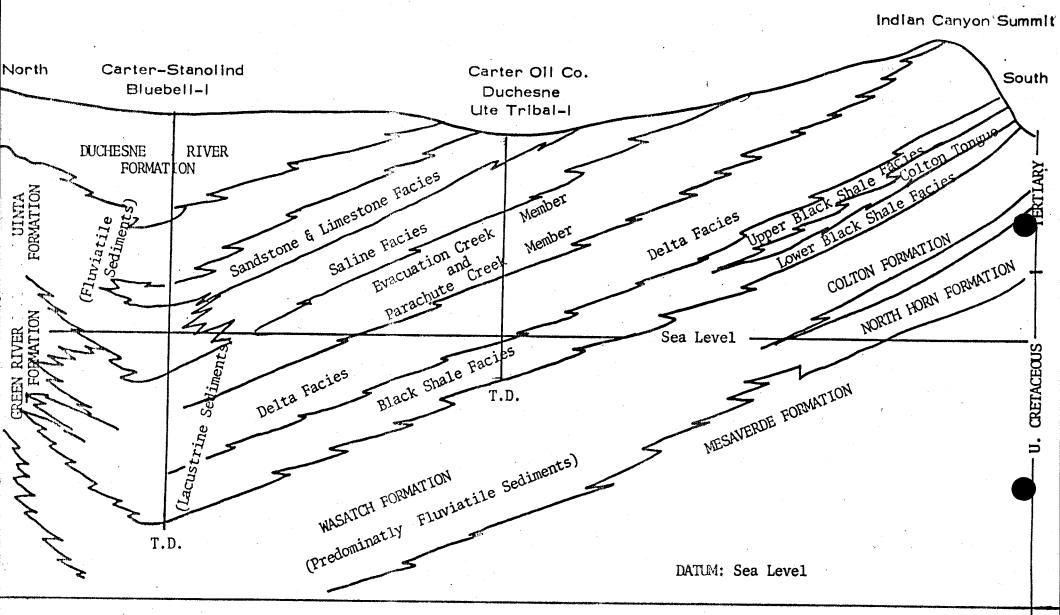
- 1. Schematic of the required casing and cementing program.
- 2. Cross section of the Uinta Basin.
- 3. Schematic of the general ground water protection program.

E. W. Guynn District Oil and Gas Supervisor

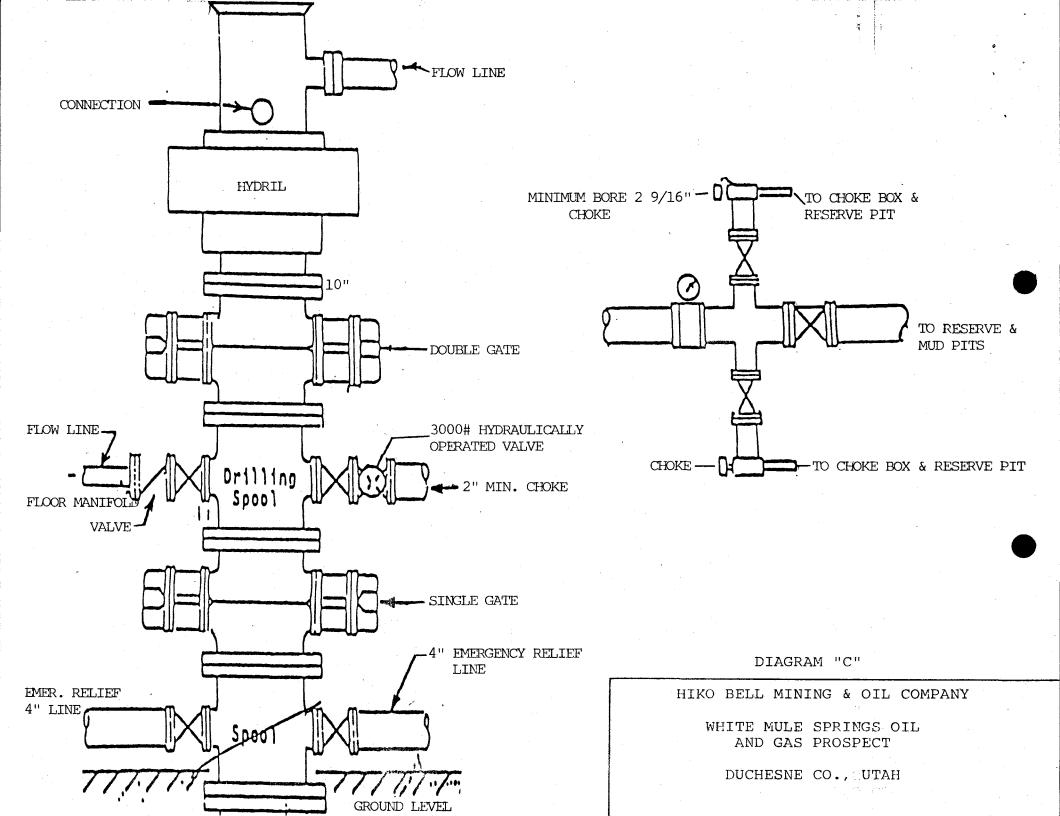
### PARTIAL CASING & CEMENTING PROGRAM FOR WELLS IN THE

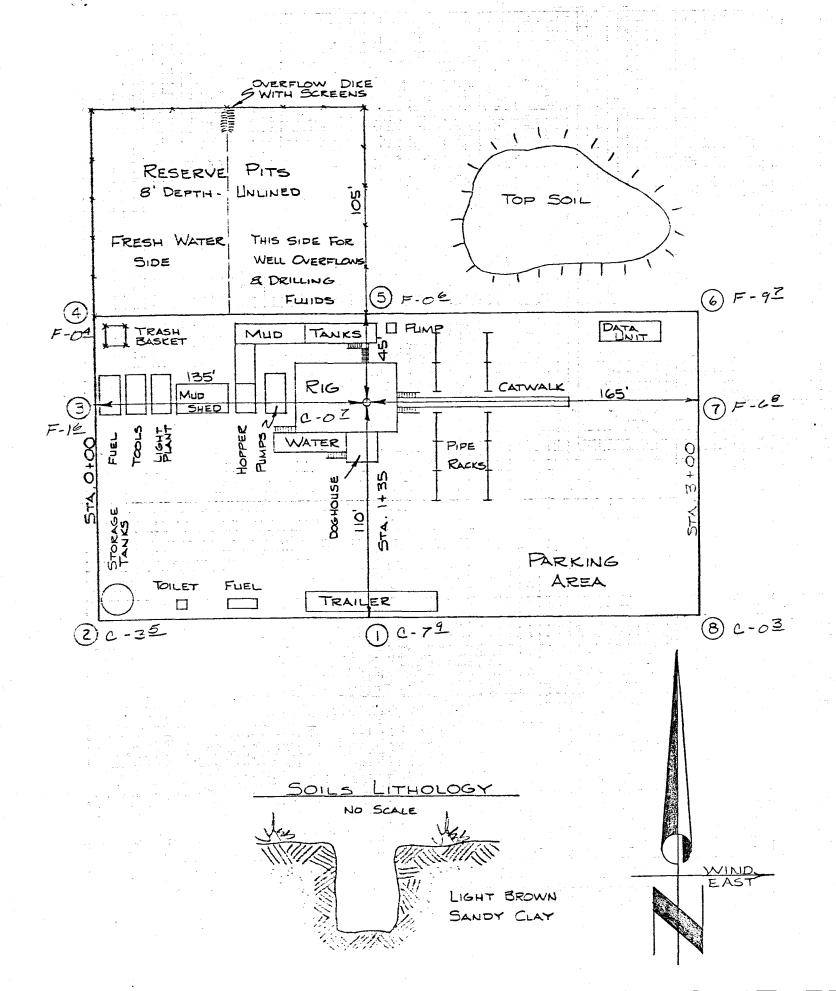
WHITE MULE SPRINGS OIL
AND GAS FIELD
DUCHESNE CO., UTAH

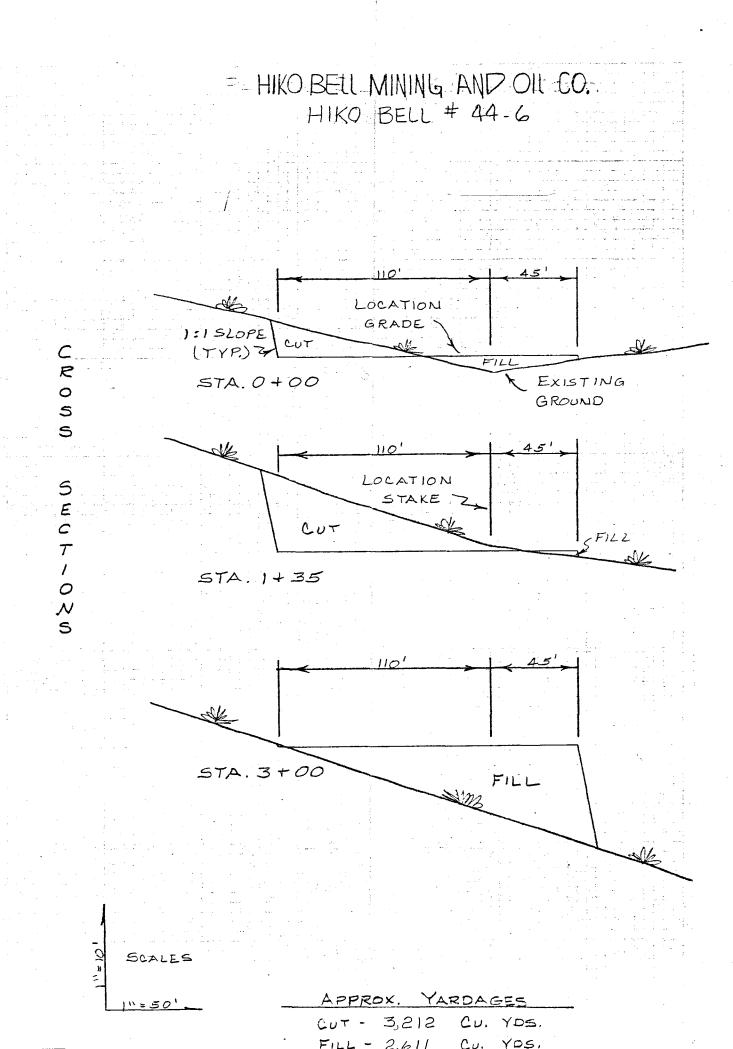


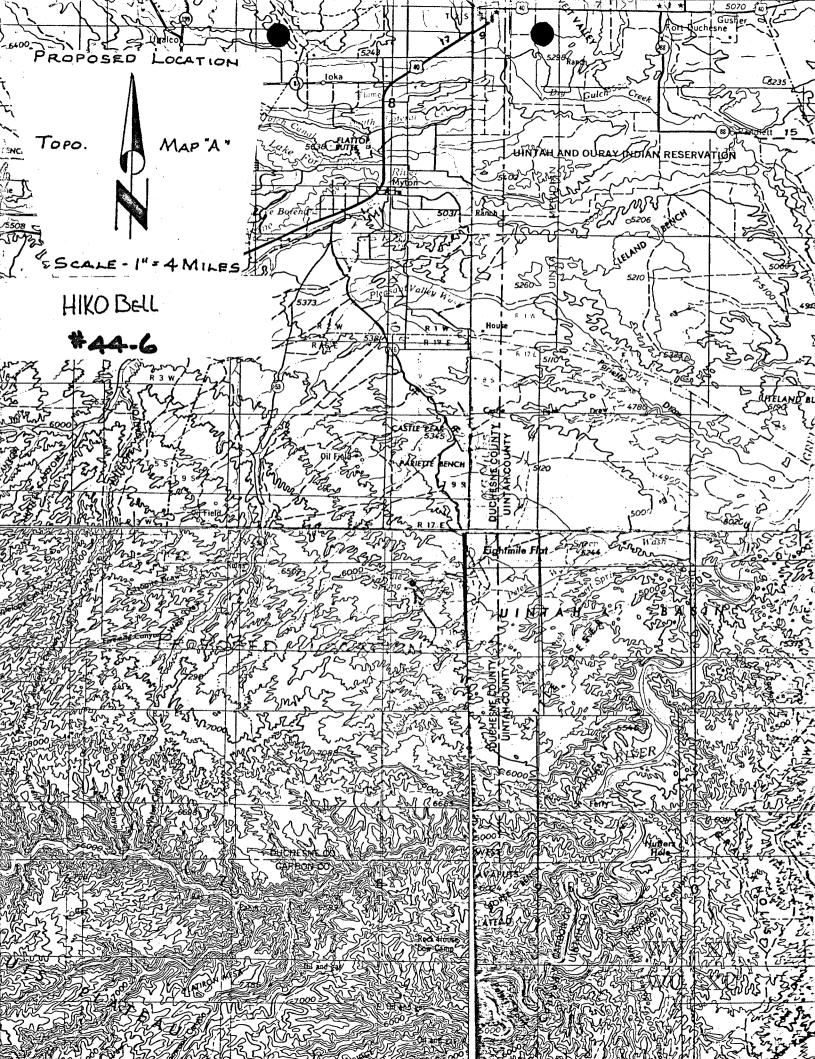


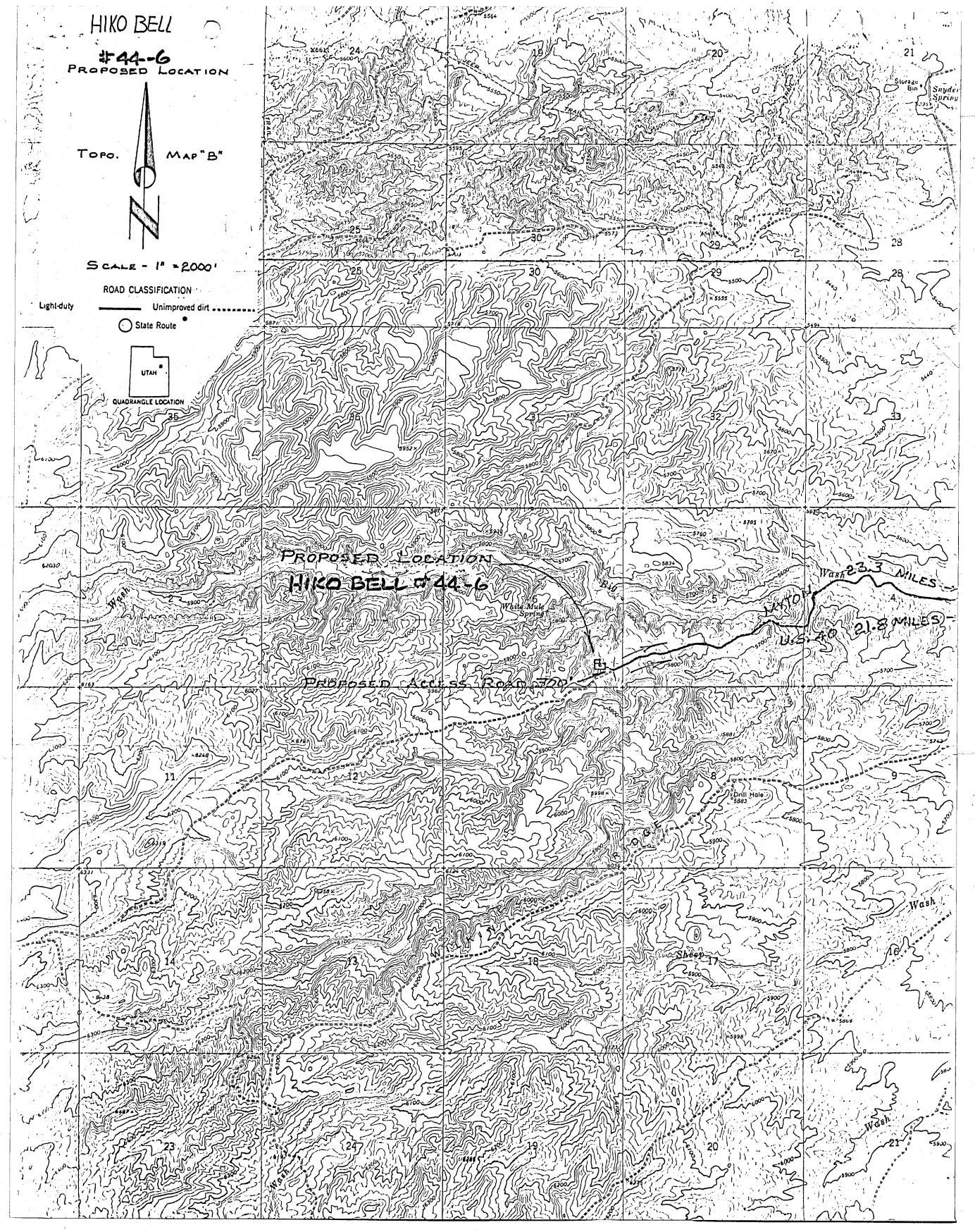
View east of cross section of Uinta Basin showing stratigraphy and intertonguing of Tertiary rocks. Ute Tribai-I (in cross section) is located about 8 miles southeast of the application area.











CULTURAL RESOURCE INVENTORY OF FOUR WELL PADS AND ACCESS ROADS NEAR WILKIN RIDGE, DUCHESNE COUNTY, UTAH

Cultural Resources Reports

Number 82-8

Submitted to

Bureau of Land Management
Vernal District
Diamond Mountain Resource Area
170 South 500 East
P.O. Box F
Vernal, Utah 84078

by

Alan R. Schroedl
Principal Investigator
P-III Associates
419 Boston Building
9 Exchange Place
Salt Lake City, Utah 84111

November 24, 1982

Work Completed Under
Department of Interior Antiquities Permit Number 82-UT-172

	U.S.  Department of the Interior	BLM Report	t I Oo. LIL	<u> -                                    </u>	1
	Bureau of Land Management  • Utah State Office	Report Acc	ceptable Yes	No	
I	Summary Report of Inspection for Cultural Resources	Mitigation Comments:	n Acceptable Yes	No	
_			الماماما المامان		
•	Report Title FOUR WELL PAD  Hiko Bell Mining an	ols   -   b   u   c   H   E	EIS IN 1E 1 - IC 10 - 11 - 1 - 40	<b>3</b>	•
-	Development Company HIRO Bell Hilling di				
•	Report Date [1] 1 24 [1] 9 8 2 43 46	4. Antiquit	ies Permit No		
	Responsible Institution P - I   I   A	SSOCIATES 61	County <u>Duche</u>	esne	<del></del>
•	Fieldwork Location: TWN 1 0   S   Range	66 69	ion(s) 5   6   70.71   72.73	7 8 74 75 76 77	-
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•	Resource Area DM TWN Range	98 101	ion(s) 102103 10410	5 106107 106109 55,69,81,85,97,101	Only
	PO= PONY EXPRESS, BR= BEAR RIVER, PR= PRICE RIVE BC= BOOK CLIFFS HR= HOUSE RANGE, SE= SEVIER RIVE HM= HENRY MOUNTAINS, BE= BEAVER RIVER, DX= DI KA= KANAB, ES= ESCALANTE, SJ= SAN JUAN, GR= GI SR= SAN RAFAEL, DM= DIAM CND MOUNTAIN,	IR, WS=WARM SPRINGS IER IX IE RAND	V=Vernal Merio H=Half Townsh	tian	
•	Description of Examination Procedures.	The area of direct	impact (roughly 3	300' by 300')	
:	plus a 10 m buffer zone on each side, was conducted on foot, in adjacent sweeps no intensively surveyed for the access rout	o more than is m apa	art. A 30 m corri	ne survey was idor was	
9.	Linear Miles Surveyed 112 117	10.	Inventory Type []	[] 50	
	ond/or 112 117  Definable Acres Surveyed 118 i 123		R=Reconnaisance I=Intensive S=Statistical Sample		
	Legally Undefinable Acres 11 141 121 1				
	(*A parcel hard to codostrolly locate i.e., tenter of	of section) idices, if appropri	ate) 12. Number S	Sites Found: O	
1	No citos or cultural materials were	observed at any or	the No sites=	= 0 151	
	drill pad locations or access routes	ntory of Four Well	13, Collection	n:  N Y=Yes	, N=
	Pads and Access Roads Near Wilkin Ric Utah."	age, bucheshe count			
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4	. Actual/Potential National Register Pr	operties Affected:	None.		
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۱5	. Literature Search: Bureau of Land Man . Conclusion/Recommendations:	nagement, Utah State	office, 11/23/82		
6	. Literature Search: Bureau of Land Man . Conclusion/Recommendations: Cultural resource	clearance is recomm	e Office, 11/23/82		

for printing only Attachingen

#### MANAGEMENT SUMMARY

In November, 1982, P-III Associates conducted a cultural resources inventory of four well pads and access roads near Wilkin Ridge on Bureau of Land Management land, Vernal District, Diamond Mountain Resource Area in Duchesne County. Utah. The project was undertaken on behalf of Hiko Bell Mining and Oil Company, Vernal. Utah.

Two of the well pads are located immediately adjacent to existing roads. The other two well pads are situated within several hundred meters of an existing road. P-III Associates intensively inventoried all four well pads and access routes to the two pads that were not next to the existing roads.

No sites were observed at any of the well pads or within the access routes. Cultural resource clearance is recommended for all of the areas inventoried by P-III Associates.

#### INTRODUCTION

On November 23, 1982, P-III Associates of Salt Lake City, Utah, completed a cultural resource inventory of four oil well pads and associated access roads on Bureau of Management land in the Vernal District, Diamond Mountain Resource Area, in northeastern Utah. The work was performed by Alan R. Schroedl, Principal Investigator, and Tim Pratt, staff archaeologist, at the request of Hiko Bell Mining and Oil Company. Ken Young of Hiko Bell accompanied the field crew during the inventory.

The project was undertaken to comply with federal historic preservation laws and Executive Order 11593 which requires inventory and evaluation of cultural resources on federal lands. The work was conducted under the provisions of P-III Associates' Department of Interior Antiquities Permit No. 82-UT-172 which expires on April 8, 1983.

#### LOCATION

The four well pads are located within a four square mile area in the southern part of Duchesne County, south of Myton, Utah. Three of the pads are situated on an unnamed ridge a half mile south of White Mule Springs and Big Wash. The other well pad is located on Wilkin Ridge. Access to these well pads is by an unimproved dirt road that can be reached from the Sand Wash access road. One drill pad is located in each of sections 5, 6, 7, and 8 of TlOS, R17E (Figure 1).

#### **METHODS**

A 300 ft by 300 ft drilling area had been previously staked and flagged by Uintah Engineering at each of the well pads. This area plus a 10 m buffer zone on all four sides of the pad was intensively inventoried for each well location. The area was surveyed on foot in adjacent sweeps with no more than 15 m between surveyors. The access routes to Wells 23-8 and 44-6 had been previously staked or marked. A 30 m wide corridor was intensively inventoried in 10-15 m sweeps for each access road. The access routes for Wells 23-8 and 44-6 were 25 m and 90 m long respectively.

A search of existing records was performed at the State Office of the Bureau of Land Management to determine if there were any previously recorded cultural resources in the project area or if the project area had been previously inventoried. While considerable work has been conducted in the surrounding area, no cultural resource work has been conducted in the immediate project area. One major project has been completed in the vicinity of the well pads, a survey of the Pariette Bench by the University of Utah for the Central Utah Project in 1977 (Sisson 1977, Sisson 1978). In a survey of 2,964 acres on the Pariette Bench and Eight-Mile Flat area Sisson (1977) recorded only two sites, one historic and one prehistoric. Thus, the site density in this area of Duchesne County is apparently very low.

In 1981 AERC recorded 42DC353, the Lima Bean site, several miles to the north of the study area. A fragment of a Folsom point was recovered from this site in an area of desert pavement. This may indicate that other Paleo-Indian components could be discovered in the area.

Vernal District Archaeologist Blaine Phillips was notified both before and after completion of the survey.

#### DRILL PAD DESCRIPTION AND SURVEY RESULTS

No cultural resources, historic or prehistoric, were observed during the inventory of the four drill pads and associated access roads.

#### Well Pad 23-8

Legal Description: SE 1/4, NE 1/4, SW 1/4, Sec. 8, T10S. R17E Salt Lake Principal Meridian, Duchesne County, Utah

Elevation: 5910 feet

Map Reference: U.S.G.S. 7.5' Wilkin Ridge, Utah, 1965

Area Surveyed: 120 m by 120 m square with drill hole located at the center. Approximately 25 m of a 30 m wide access road was also inventoried.

Description: The well pad is in a shallow swale on Wilkin Ridge. Vegetation is typical of the mixed desert shrub community and is dominated by the Atriplex-Tetradymia association. Vegetation noted on this and the other well pads includes Indian rice grass (Oryzopsis hymenoides), Prickly pear (Opuntia sp.), shadscale (Atriplex confertifolia), and sagebrush (Artemisia sp.). Less than 20% of the surveyed area was covered with snow.

Results: No archaeological or historical sites were observed at this location.

Recommendation: Clearance is recommended.

#### Well Pad 21-7

Legal Description: NE 1/4, NE 1/4, NW 1/4, Sec. 7, T10S, R17E Salt Lake Principal Meridian, Duchesne County, Utah

Elevation: 5950 feet

Map Reference: U.S.G.S. 7.5' Wilkin Ridge, Utah, 1965

Area Surveyed: 120 m by 120 m square with the drill hole located at the center.

Description: The drill pad is located on an unnamed ridge about a half mile south of White Mule Springs. Vegetation is typical of a mixed desert shrub zone and is dominated by grasses, salt-bush and sage. Less than 20% of the area surveyed was covered with snow.

Results: No cultural resources were observed.

Recommendation: Clearance is recommended.

#### Well Pad 44-6

Legal Description: SE 1/4, SE 1/4, SE 1/4, Sec. 6, T10S, R17E Salt Lake Principal Meridian, Duchesne County, Utah

Elevation: 5885 feet

Map Reference: U.S.G.S. 7.5' Wilkin Ridge, Utah, 1965

Area Surveyed: A 120 m by 120 m area was inventoried with the drill hole at the center. Approximately 90 m of a 30 m wide access road was also inventoried.

Description: The well pad is northeast of a small rise on a ridge that overlooks a tertiary drainage of Big Wash, which is half a mile to the north of the drill pad. Vegetation is sparse, and is typical of a mixed desert shrub zone. It is similar to vegetation at the other three drill pad locations. Less than 25% of the total survey area was covered with snow.

Results: No cultural resources were observed.

Recommendations: Clearance is recommended.

#### Well Pad 14-5

Legal Description: NW 1/4. SW 1/4. SW 1/4, Sec. 5, T10S, R17E Salt Lake Principal Meridian, Duchesne County, Utah

Elevation: 5860 feet

Map Reference: U.S.G.S. 7.5' Wilkin Ridge. Utah, 1965

Area Surveyed: A 120 m by 120 m area was surveyed with the drill hole at the center.

Description: The well pad is located on the south side of the ridge on which drill pad 21-7 and 44-6 are located. This location overlooks a small draw to the south. The existing road runs

through a portion of the surveyed area. Vegetation is typical of the <u>Atriplex-Tetradymia</u> association, with an abundance of small grasses in this drill pad location. Less than 20% of the survey area was covered by snow.

Results: No cultural resources were observed.

Recommendations: Clearance is recommended.

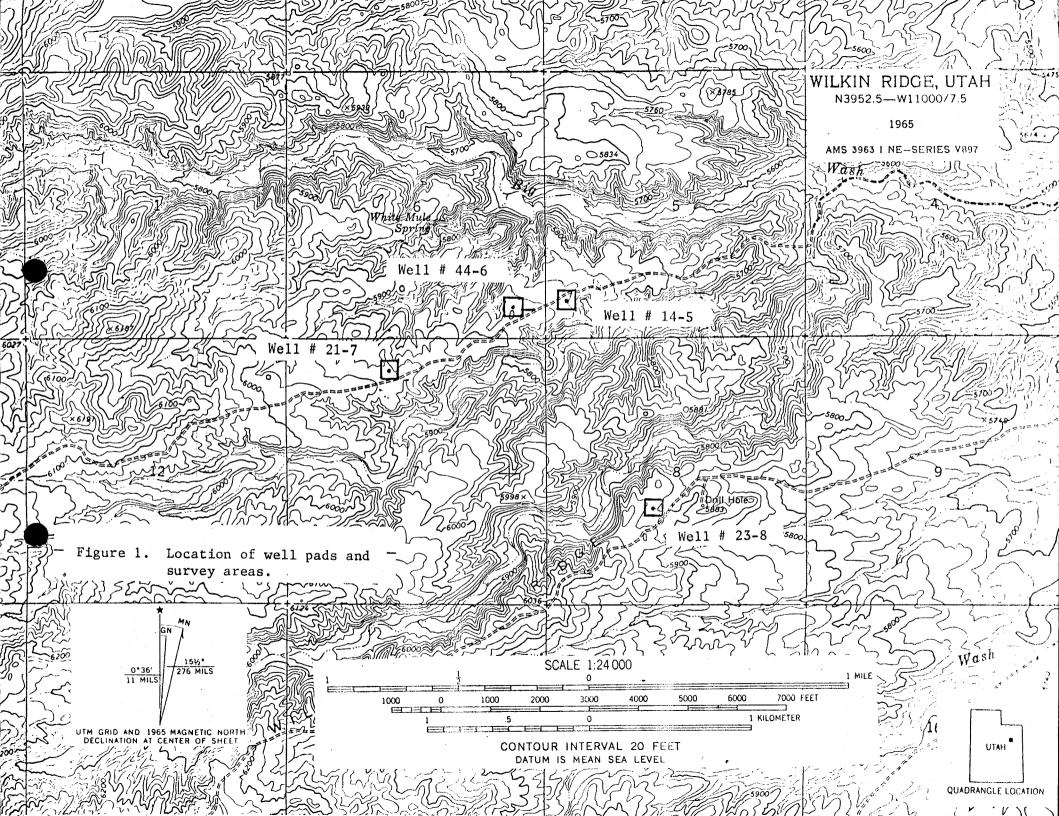
#### RECOMMENDATIONS

Cultural resource clearance is recommended for four well pad locations and access roads to Hiko Bell Mining and Oil Company locations 23-8, 21-7, 44-6, and 14-5.

#### REFERENCES CITED

Sisson, E. B.

- 1977 A reconnaissance survey of Pariette Bench and Eight-Mile Flat, Uintah and Duchesne Counties, Utah. Unpublished report on file, Archeological Laboratory, University of Utah, Salt Lake City.
- 1978 Final report: Survey and evaluation of archeological and historical resources: Central Utah Project, 1977. Special report, University of Utah, Salt Lake City.



### DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE:

SERIAL NO.:

11 - 50972

and hereby designates

NAMB:

AFE Management Inc.

2932 Edge Rock Circle

ADDRESS:

208-372 Bay St., Toronto, Ontario

Salt Lake City, Utah

84117

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 10 South - Range 17 East, SLM, Duchesne Co., Utah:

Section 5: Lot 4, SW4, NW4, SW4

Section 6: Section 7: All

Section 8: NWY NEY, NEY NWY, WY WY

Containing 1,746.10 acres.

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

Craio Caldwel

Utah,

O'LL COMPAN'

Robert E.

(Date)

Sept. ]3, ]983

DATE 12-3-82 OPERATOR COUNTY Duches SESE 6 T 105 R 17E POSTING CHECK OFF: **INDEX** HLPINID MAP PROCESSING COMMENTS: PART OF TRACT 18 WHICH IS NOT COMMITTED TO WILKIN RIDGE UNIT NO WELLE WITHIN 1000' APPROVAL LETTER: c-3-a SPACING: CAUSE NO. & DATE UNIT c-3-c -c-3-b SPECIAL LANGUAGE:

4	RECONCILE WELL NAME AND LOCATION ON APD AGAINST SAME DATA ON PLAT MAP.
0	AUTHENTICATE LEASE AND OPERATOR INFORMATION
U	VERIFY ADEQUATE AND PROPER BONDING /
V	AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.
1	APPLY SPACING CONSIDERATION
	ORDER 100
•	UNIT
	c-3-b
٠	c-3-c
4	OUTSTANDING OR OVERDUE REPORTS FOR OTHER WELLS OF THE OPERATOR.
H	IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

December 6, 1982

Hiko Bell Mining & Oil Company P. O. Drawer AB Vernal, Utah 84078

RE: Well No. Hiko Bell #44-6 SESE Sec. 6, T.10S, R.17E Duchesne County, Utah

#### Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to oil well is hereby granted in accordance with Rule C-3(b), General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

RONALD J. FIRTH - Engineer

CLEON B. FEIGHT - Director

Office: 533-5771

OR

Office: 533-5771

Home: 571-6068

.

Home: 466-4455

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (acquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

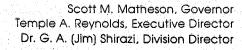
The API number assigned to this well is 43-013-30716.

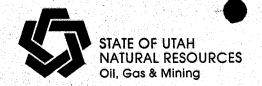
Sincerely,

Norman C. Stout

Administrative Assistant

NCS/as cc: MMS Enclosure





4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 24, 1983

Hiko Bell Mining & Oil Company P. O. Drawer AB Vernal, Utah 84078

Re: Well No. Hiko Bell # 44-6 660'FSL, 660' FEL SE SE, Sec. 6, T. 10S, R. 17E. Duchesne County, Utah

> Well No. Hiko Bell # 21-7 724' FNL, 1935' FWL NE NW, Sec. 7, T. 10S, R. 17E. Duchesne County, Utah

> Well No. Hiko Bell # 23-8 1761' FSL, 2055' FWL NE SW, Sec. 8, T. 10S, R. 17E. Duchesne County, Utah

#### Genltemen:

In reference to the above mentioned wells, considerable time has gone by since approval was obtained from this office.

This office has not received any notification of spudding. If you do not intend to drill these wells, please notify this Division. If spudding or any other activity has taken place, please send necessary forms. If you plan to drill these locations at a later date, please notify as such.

We will be happy to acknowledge receipt of your response to this notice if you will include an extra copy of the transmittal letter with a place for our signature, and a self addressed envelope for the return. Such acknowledgement should avoid unnecessary mailing of a second notice from our agency.

Your prompt attention to the above will be greatly appreciated.

Respectfully,

DIVISION OF OIL, GAS AND MINING

Pari Jurse

Cari Furse

Well Records Specialist

#### AFE MANAGEMENT INC.

372 BAY STREET, SUITE 208, TORONTO, ONTARIO M5H 2W9

November 3, 1983

State of Utah Natural Resources Oil, Gas and Mining 4241 State Office Building Salt Lake City, Utah USA 84114

ATTENTION: Cari Furse

Gentlemen:

RE: Well No. Hiko Bell #44-6, 660'FSL, 660' FEL SE SE, Sec. 6, T. 10S, R. 17E., Duchesne County, Utah

Well No. Hiko Bell #21-7, 724' FNL, 1935' FWL NE NW, Sec. 7., T. 10S, R. 17E., Duchesne County, Utah

Contacted

Benna BLM Ulemal 5/03/84

Well No. Hiko Bell #23-8, 1761' FSL, 2055' FWL NE SW, Sec. 8, T. 10S, R. 17E., Duchesne County, Utah

Your letter of October 24th to Hiko Bell Mining and Oil Company regarding the above wells has been forwarded to us for reply.

AFE Management Inc. is now the Operator of the above captioned wells. A copy of the Designation of Operator is enclosed for your records. We are also the Assignee of Oil and Gas Lease Serial No. U50972 on which the subject wells are located.

Please be advised that it is our intention to proceed with the drilling of the wells. We would like to change the name of the above wells to AFE 44-6. 21-7 and 23-8 and would ask your assistance in advising us on how we might go about instrumenting this change.

Thank you for your assistance, we look forward to hearing from you soon.

Yours truly,

Edward W. Wenger

AFE MANAGEMENT INC

President

EWW:acp Enclosure

c.c. Hiko Bell

3100 U-810

April 11, 1984

Hiko Bell Mining & Oil Company
P.O. Drawer AB
Vernal, UT 84078

Re: Rescind Application for Permit to Drill Well No. White Mule Springs #44-6 Section 6, TlOS, R17E Duchesne County, Utah Lease U-50972

#### Gentlemen:

The Application for Permit to Drill the referenced well was approved on January 3, 1983. Since that date, no known activity has transpired at the approved location. Under current District policy, applications for permit to drill are effective for a period of one year. In view of the foregoing, this office is rescinding the approval of the referenced application without prejudice. If you intend to drill at this location at a future date, a new application for permit to drill must be submitted.

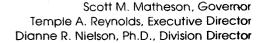
This office requires a letter confirming that no surface disturbance has been made for this drill site. Any surface disturbance associated with the approved location of this well is to be rehabilitated. A schedule for this rehabilitation must be submitted to this office. Your cooperation in this matter is appreciated.

Sincerely,

Lloyd H Ferguson District Manager

cc: Well File State 0 & G SMA

JKenezkaima





4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 25, 1985

Bureau of Land Management Vernal District Office 170 South 500 East Vernal, Utah 84078

#### Gentlemen:

Re: Well No. AFE 44-6 - Sec. 8, T. 10S., R. 17E.

Duchesne County, Utah - API #43-013-30716

Operator of Record - AFE Management Limited

The above referred to well in your district was given Federal approval to drill January 7, 1983. This office has not received notification of any activity on this location.

Please let me know what action, if any, the Bureau of Land Management is taking on this well.

Thank you for your help in keeping our records up to date.

Sincerely,

Claudia L. Jones Well Records Specialist

Claudia L. Jones

cc: Dianne R. Nielson
 Ronald J. Firth
 John R. Baza
 File
0009S/11

Scott M. Matheson, Governor Temple A. Reynolds, Executive Director Dianne R. Nielson, Ph.D., Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

February 11, 1985

AFE Management Ltd. 372 Bay Street, Suite 208 Toronto, Ontario, Canada M5H 2W9

Gentlemen:

Re: Well No. AFE 44-6 - Sec. 6, T. 10S., R. 17E Duchesne County, Utah - API #43-013-30716

In concert with action taken by the Bureau of Land Management, April 11, 1984, approval to drill the above-indicated well is hereby rescinded.

A new "Application for Permit to Drill" must be filed with this office, for approval, prior to future drilling of the subject location.

Sincerely,

John R. Baza

∱etroleum Engineer

clj

cc: Dianne R. Nielson Ronald J. Firth

File

000875/43